HW#16: Transversal Application

Due Date: Wednesday, Oct. 2nd

Name: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ TP: \_\_\_\_\_\_\_

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| 1. In the figure below, lines *a* and *b* are parallel, and 9 = 100. Find 1. | 2. In the figure below, segments *MA* and *HT* are parallel. HMA, MAT, ATH, and THM are all right angles. If 5 = 75 and what is the 4?  2  5  6  3  7  4  1  H  T  M  A |
| 3. In the figure below, *AD*  *BD* and *DC AB*. If *m*B is 30, what is *m*C?   1. 30 2. 60 3. 150 4. Cannot be determined   *A*  *D*  *C*  *B*  Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 4. In the figure below, lines *l* and *m* are parallel. Find the indicated angle.  45  ?  *l*  130 o o  *m* |
| 5. If 12 4, then which pairs of lines, if any, must be parallel?     1. *a b* only 2. *m n* only 3. *a b* and *m n* 4. No lines must be parallel 5. Cannot be determined from the given information   Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ | 6. In the figure below, lines *p* and *q* are parallel. Which of the following must be true?     1. 5 = 2 2. 6 = 4 3. 5 + 7 = 180 4. 5 + 6 = 180 5. None of the above   Justify your response: \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_  \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ |

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| 7. Exeter Harkins Critical Thinking  Let *A* = (0*,* 0), *B* = (6*,* 2), *C* = (*−*5*,* 2), *D* = (7*,* 6), *E* = (*−*1*,* 7), and *F* = (5*,* 9). Draw lines *AB*, *CD*, and *EF*. Verify that they are parallel.  **(a)** Draw the transversal of slope *−*1 that goes through *E*. This transversal intersects line  *AB* at *G* and line *CD* at *H*. Use your ruler to measure *EH* and *HG*.  **(b)** Draw any transversal whose slope is 2 (it need not go through *E*), intersecting line  *AB* at *P*, line *CD* at *Q*, and line *EF* at *R*. Use your ruler to measure *PQ* and *QR*. |